It is claimed:

1.   A computer-implemented method for assessing performance-related data for a preselected set of performers, comprising the steps of:

5   receiving data about performance measures of a first performer;

receiving business logic rules related to at least one of the performance measures;

constructing a mathematical optimization program that includes an overall performance rating as an objective function; and

using the mathematical optimization program to optimize the overall performance

10   rating of the first performer by adjusting a set of weights constrained by the business logic rules;

wherein the overall performance rating is used to assess the performance of the first performer.

15   2.   The method of claim 1 further comprising the steps of:

determining absolute weight relationships of the performance measures based upon the business logic rules; and

using the mathematical optimization program to optimize the overall performance rating of the first performer by adjusting the determined absolute weight ranges

20   constrained by the business logic rules.

3.   The method of claim 2 further comprising the steps of:

determining relative weight ranges of the performance measures based upon the business logic rules and the absolute weight ranges; and

using the linear program model to optimize the overall performance rating of the first performer by adjusting the determined relative weight relationships constrained by the business logic rules.

4.   The method of claim 1 wherein the objective function seeks optimality in the overall performance rating for the first performer constrained by the business logic rules.

5.   The method of claim 4 wherein the objective function is solved such that the overall performance rating is maximum.

6.   The method of claim 1 further comprising the step of:

normalizing the performance measures data such that the performance measures data have substantially similar ranges.

7.   The method of claim 1 further comprising the steps of:

receiving performance measures data for a second performer; and

using the mathematical optimization program to optimize the overall performance rating of the second performer by adjusting a set of weights constrained by the business logic rules, such that the set of weights of the second performer is different from the set of weights for the first performer,

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wherein the second performer's overall performance rating is used to assess performance of the second performer with respect to performance of the first performer.

8.   The method of claim 7 further comprising the step of:

ranking the overall performance rating of the second performer relative to the overall performance rating of the performer.

9.   The method of claim 1 wherein the preselected set of performers includes suppliers that are to be assessed.

10.   The method of claim 1 wherein the preselected set of performers includes services that are to be assessed.

11.   The method of claim 1 wherein the preselected set of performers includes products that are to be assessed.

12.   The method of claim 1 wherein the mathematical optimization program is a non-linear program module.

13.   The method of claim 1 wherein the mathematical optimization program is a linear programming module.

14.   The method of claim 13 further comprising the step of:

        converting the business logic rules into constraints for use by the linear

programming module in optimizing the overall performance rating of the first performer,

        wherein the overall performance rating is used to assess the performance of the

5   first performer.

15.   The method of claim 13 wherein the business logic rules are rules selected from

the group consisting of rules that model relative importance between categories contained

within the performance measures data, rules that model relative importance between

10   bounded categories contained within the performance measures data, rules that model

absolute importance of a category contained within the performance measures data, rules

that model absolute importance of a bounded category contained within the performance

measures data, and combinations thereof.

15   16.   The method of claim 1 wherein each of the performers is evaluated by the

mathematical optimization program in isolation by solving for the best possible

combination of the weights that maximizes the overall performance rating of each

performer.

20   17.   The method of claim 1 wherein the performance measures data interrelates a

performer with at least two performance measurements.

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18.   The method of claim 1 further comprising the steps of:

receiving performance measures data for a plurality of performers;

using the mathematical optimization program to optimize the overall performance

rating for each of the performers; and

5   forming tiers by grouping the performers based upon their respective overall

performance ratings.

19.   The method of claim 18 further comprising the steps of:

providing the overall performance ratings of the performers to a statistical analysis

10   program means; and

forming non-uniform tiers by grouping the performers based upon performance

distribution analysis performed by the statistical analysis program means.

20.   A computer-implemented apparatus for analyzing performance measures data for

15   a preselected set of performers, comprising:

a constraint engine that constructs constraints based upon business logic rules,

said business logic rules being related to at least one measurement contained within the

performance measures data;

a mathematical optimization program connected to the constraint engine that

20   includes an overall performance rating as an objective function;

said mathematical optimization program using the performance measures data to

optimize the overall performance rating of the performers by adjusting a set of weights

constrained by the business logic constraints,

wherein the overall performance rating is used to assess the performance of the performers.

21.   The apparatus of claim 20 wherein the objective function seeks optimality in the overall performance rating for the performers constrained by the business logic constraints.

22.   The apparatus of claim 21 wherein the objective function is solved such that the overall performance rating is maximum.

23.   The apparatus of claim 20 wherein the preselected set of performers includes suppliers that are to be assessed.

24.   The apparatus of claim 20 wherein the preselected set of performers includes services that are to be assessed.

25.   The apparatus of claim 20 wherein the preselected set of performers includes products that are to be assessed.

26.   The apparatus of claim 20 wherein the mathematical optimization program is a non-linear program module.

27. The apparatus of claim 20 wherein the mathematical optimization program is a linear programming module.

28. The apparatus of claim 27 wherein the business logic rules are converted into the constraints for use by the linear programming module in optimizing the overall performance ratings of the performers, wherein the overall performance ratings are used to assess the performances of the performers.

29. The apparatus of claim 27 wherein the business logic rules are rules selected from the group consisting of rules that model relative importance between categories contained within the performance measures data, rules that model relative importance between bounded categories contained within the performance measures data, rules that model absolute importance of a category contained within the performance measures data, rules that model absolute importance of a bounded category contained within the performance measures data, and combinations thereof.

30. The apparatus of claim 20 wherein each of the performers is evaluated by the mathematical optimization program in isolation by solving for the best possible combination of the weights that maximizes the overall performance rating of each performer.

31. The apparatus of claim 20 wherein tiers are formed by grouping the performers based upon their respective overall performance ratings.

32.   The apparatus of claim 31 further comprising:

a statistical analysis program means to analyze distribution of the overall performance ratings of the performers, wherein non-uniform tiers are formed by grouping the performers based upon the performance distribution analysis performed by the statistical analysis program means.